# Wells G&H Superfund Site
# Status of Operable Unit 1 (OU1) Source Areas Properties & Dewey/Olympia Neighborhood Well Installation Program

Joseph F. LeMay, P.E.
Remedial Project Manager
US EPA Region 1-New England
Telephone: 617.918.1323
Email: lemay.joe@epa.gov

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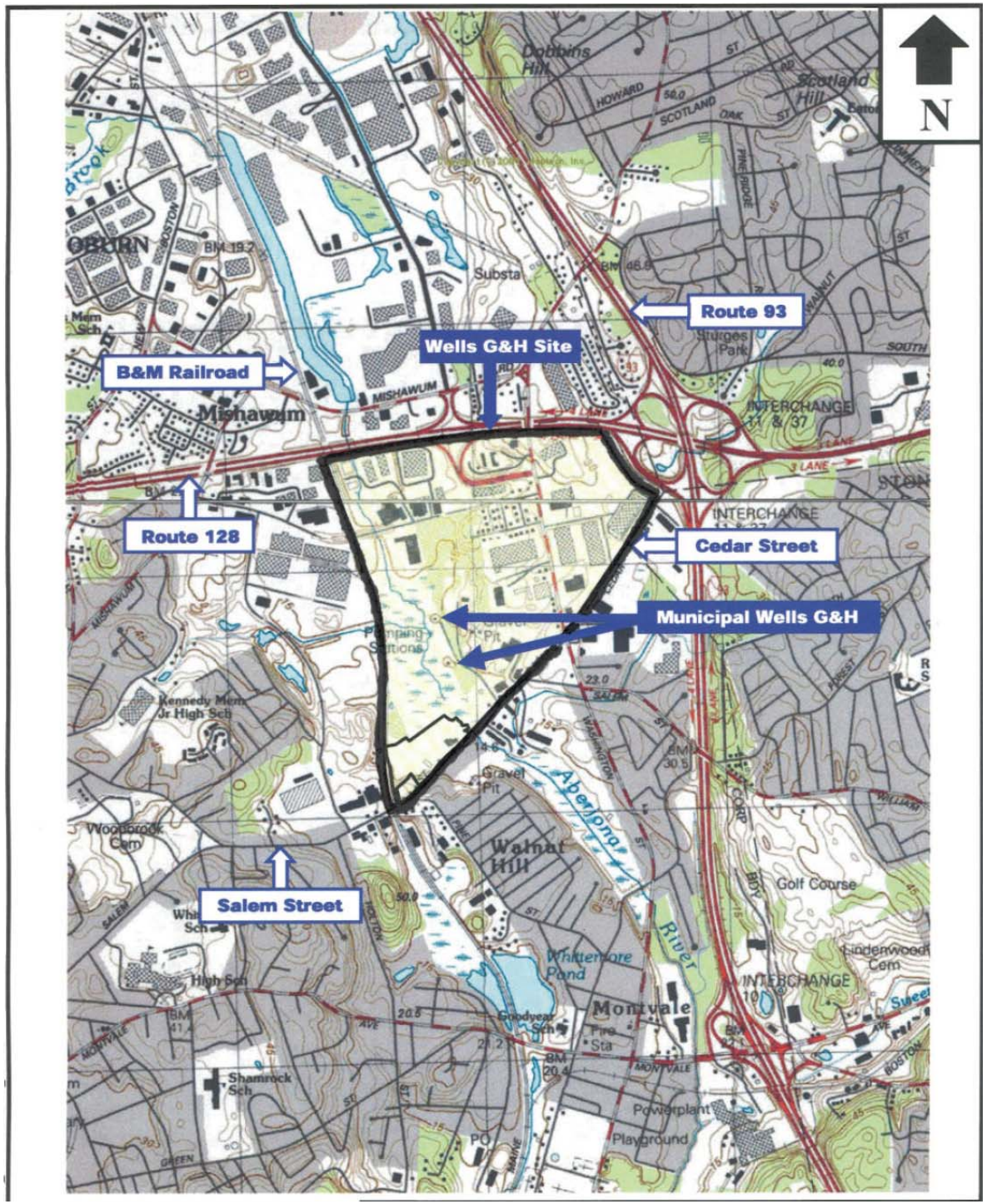
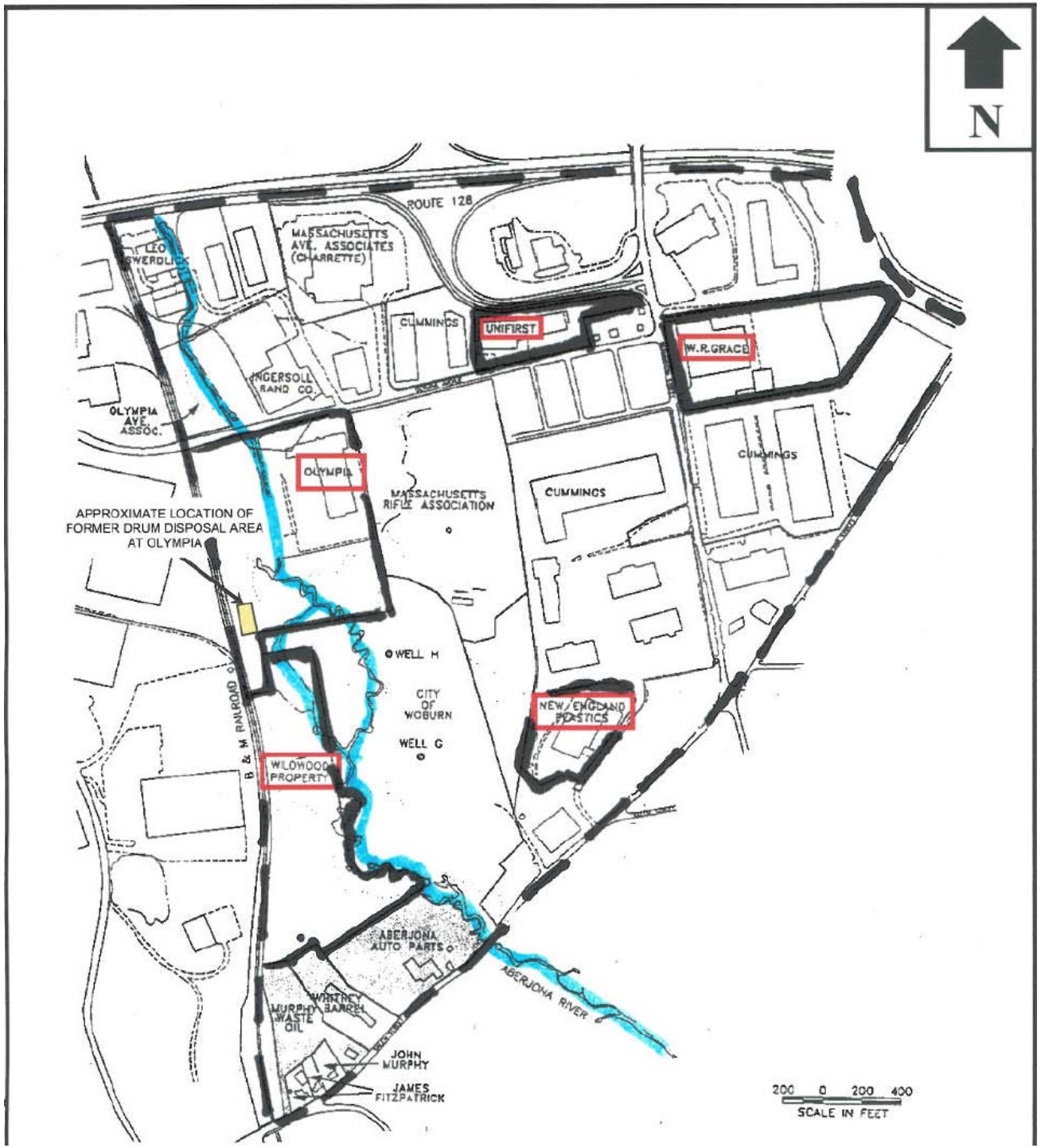
# Wells G&H Superfund Site

# Location Map



# OU1 Five Source Area (SA) Properties at Wells G&H Site



# OU1 SA Properties Successes

- Groundwater contaminant concentrations have declined at Source Area Properties, particularly within the shallow groundwater.

- Some groundwater contaminant concentrations have declined downgradient of Source Area Properties within Central Area Aquifer.

# UniFirst (15 Olympia Ave)

- **Since September 1992, installed Pump and Treatment System designed to also capture deep groundwater contamination under W.R. Grace**
- **Pumped and Treated 353 Million Gallons (MG) of contaminated groundwater**
- **Removed over 2,186 pounds of volatile contaminants**
- **Volatile contaminant concentrations in groundwater have declined**

# W.R. Grace (369 Washington St.)

- **Since September 1992, installed Pump and Treatment System designed to capture shallow groundwater contamination**
- **Pumped and Treated over 62 MG of contaminated groundwater**
- **Removed over 83 pounds of volatile contaminants**
- **Volatile contaminant concentrations in groundwater have declined**

# New England Plastics (310 Salem St.)

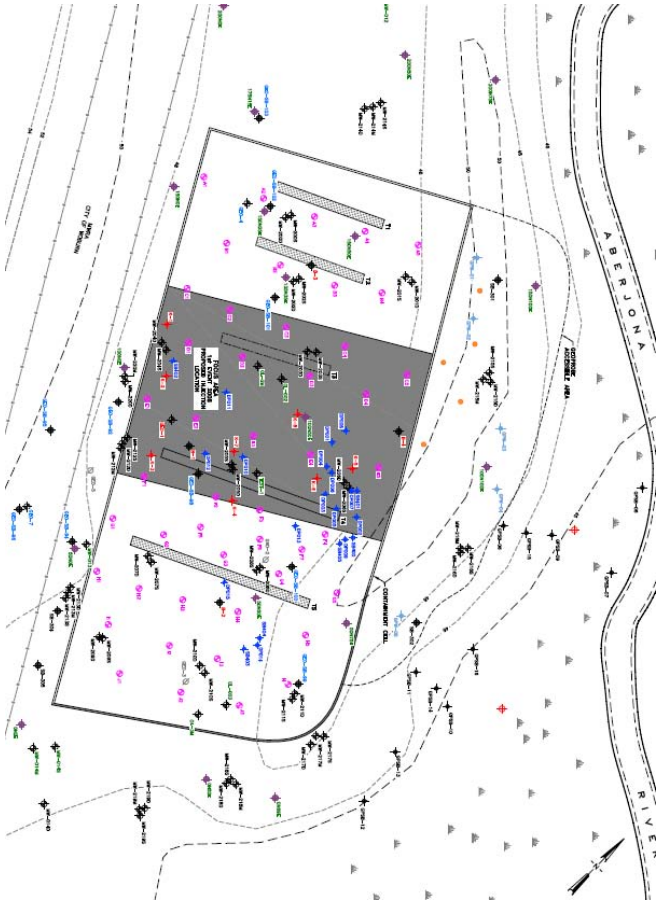
- **Implemented Air Sparging and Soil Vapor Extraction (AS/SVE) System from 1998 - 1999**
- **Achieved Soil Cleanup Levels**
- **Volatile contaminant concentrations in groundwater have declined**

# Wildwood (Rear Salem St./ Along RR)

- **Removed over 1,500 cubic yards (cyds) of debris, sludge and mixed contaminated soils in 1994**
- **Since 1998, operated AS/SVE System and Pump and Treatment System**
- **Pumped and Treated over 104 MG of contaminated groundwater**
- **Removed 2,435 pounds of volatile contaminants**
- **Volatile contaminant concentrations in groundwater have declined**

# Olympia Nominee Trust (60 Olympia Ave)

- **Under 2003 Agreement, removed 55 cyds PCB contaminated soils in 2004**
- **Under 2004 Agreement, operated In-Situ Chemical Oxidation Treatment System (since Fall 2005) within Former Drum Disposal Area (FDDA) to destroy Trichloroethylene (TCE) in soils and achieve cleanup standards.**
- **Injected over 38,000 gallons of oxidant solution**
- **Volatile contaminant concentrations in groundwater have declined**



# Five Year Review (FYR)–September 2009

**http://www.epa.gov/region1superfund/sites/wells gh/457903.pdf**

- **<u>OU1</u> Source Area Properties Potential Issues/Recommendations:**
  - Evaluate Persistent Remaining Contamination
  - Evaluate Capture Concerns with Existing Pump and Treatment Systems
  - Evaluate Current Groundwater Conditions beyond OU1 SA Properties
  - Optimize treatment systems to comprehensively achieve cleanup objectives

# OU1 Five Year Review Issue #1

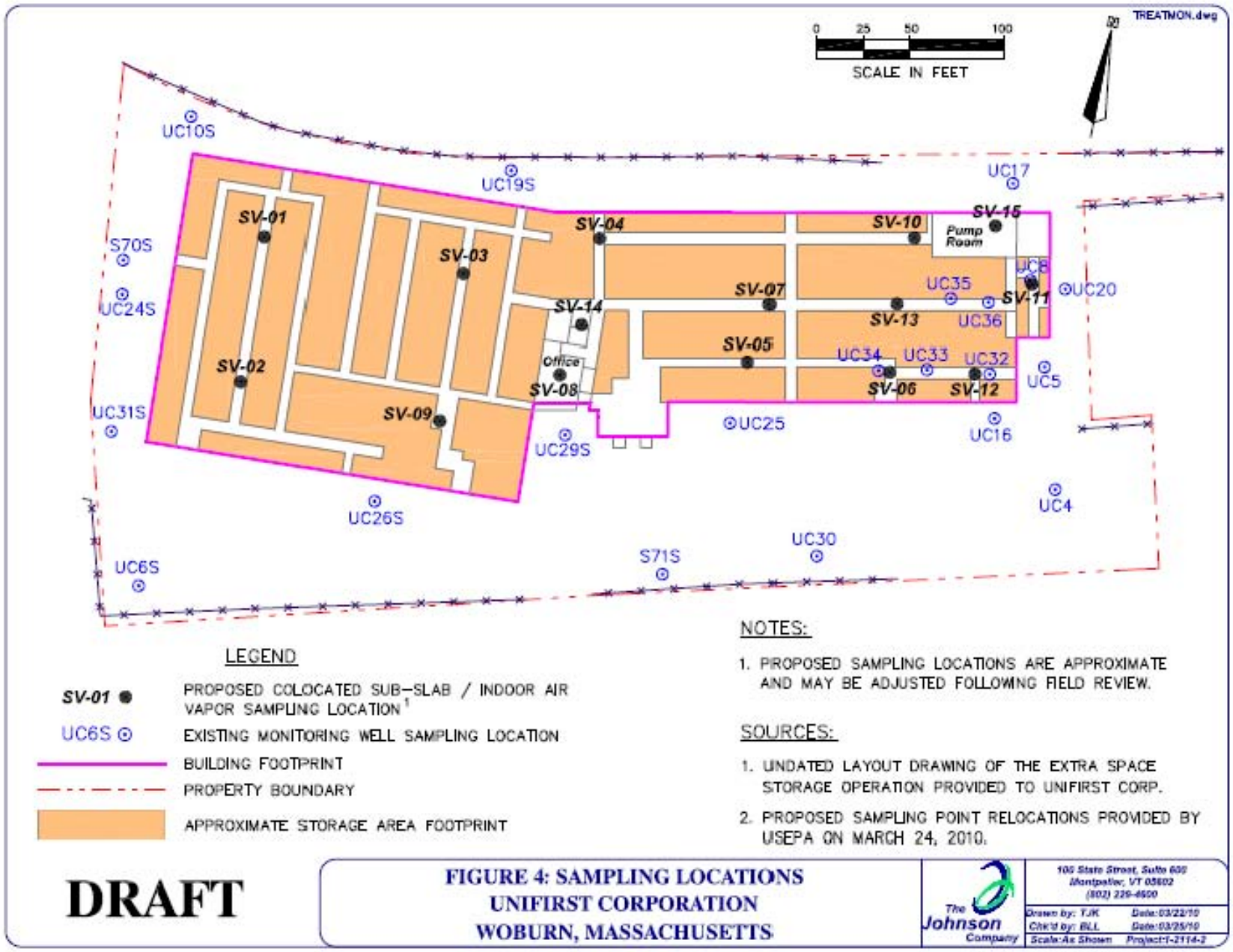
- "Potential current indoor risks above EPA's risk management guidelines based upon an evaluation of the soil gas to indoor air and soil to indoor air pathways for the existing commercial building at UniFirst"

  → **UniFirst and EPA agree on sub-slab soil gas sample and indoor air sample locations within UniFirst Building**;

  → **UniFirst completed initial sample collection on April 12, 2010;**

  → **EPA anticipates analytical results in July/August 2010.**

# UniFirst Building Sub-slab & Indoor Air Locations



# Historical Note:
# April 1989 Indoor Sampling in Neighborhood

- EPA collected Indoor Air Samples from 3 dwellings in the neighborhood.
- Low levels of contamination were detected within a range commonly detected for indoor air.
- EPA concluded No Public Health Concern at that time.
- However, information evaluated under the 2009 Five Year Review identified the need for collecting additional information.

# Changes Since 1989 regarding Vapor Intrusion Evaluation

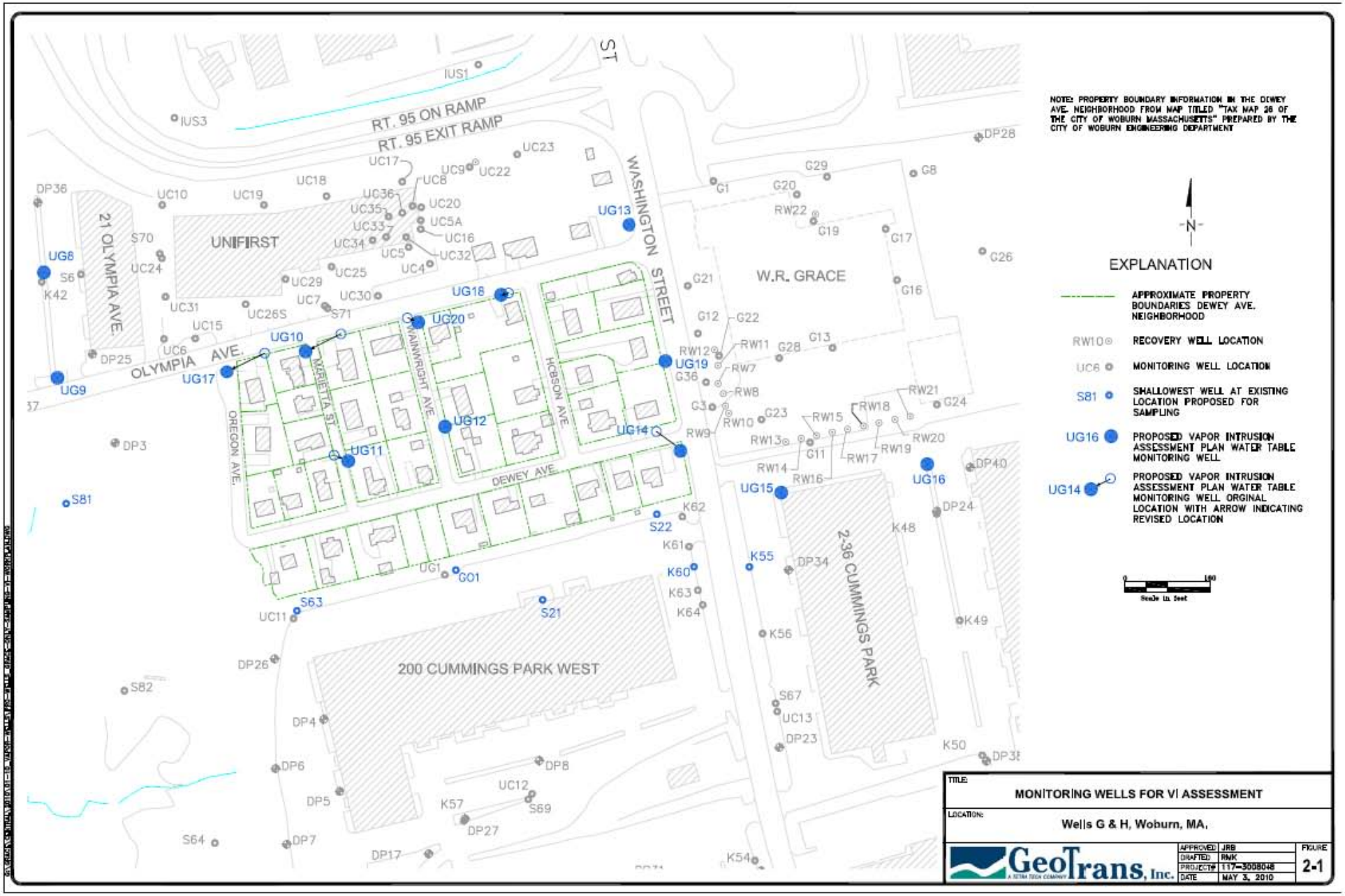
- EPA's approach to assessing potential indoor risk has improved.
- Laboratory analytical methods and detection limits have improved.
- Knowledge of chemical toxicity and health effects have improved.
- Building conditions may have changed.
- No shallow monitoring wells located directly in the neighborhood to initially assess FYR issue #2.

# OU1 Five Year Review Issue #2

- “Uncertain water quality conditions downgradient from/near the UniFirst, Grace and NEP properties that may contribute to a potential vapor intrusion pathway.”

→ **UniFirst, WR Grace, and EPA agree on installation of shallow groundwater monitoring wells in Dewey/Olympia neighborhood to evaluate the potential vapor intrusion pathway.**

# Neighborhood Shallow Monitoring Well Locations

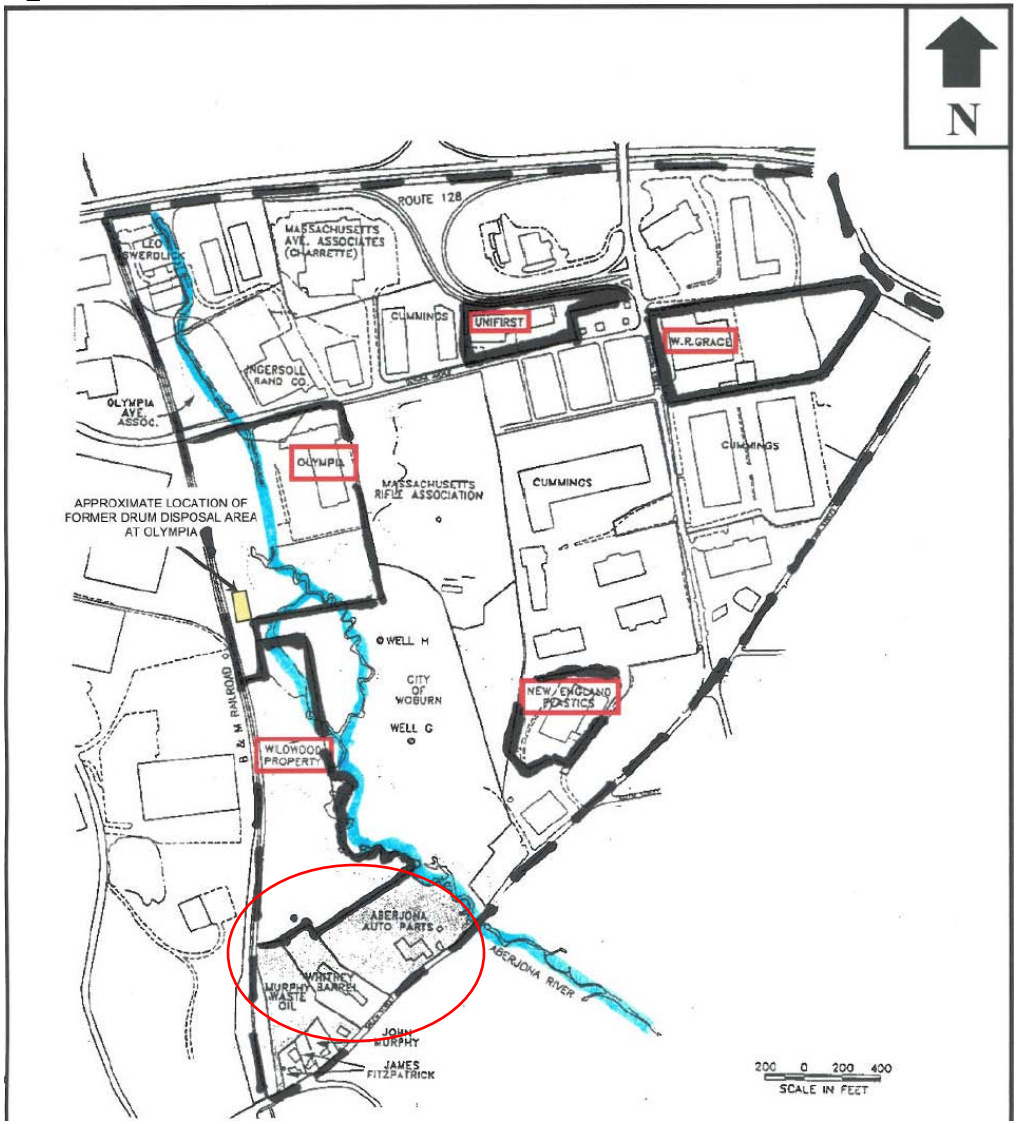


# Well Installation Program Schedule
# Dewey/Olympia Neighborhood

- May 11th- June 7th, 2010: Evaluate Existing Wells and Install Shallow Monitoring Wells (pending Traffic Management Plan acceptance)
- June 2010: Develop and Sample Wells
- August 2010: Validate Data
- September 2010: Evaluate Data
- Potential Next Steps:
  - **After 2 rounds of data collection, FYR Issue #2 addressed and no further evaluation or investigation is necessary;**
  - **Additional evaluation;**
  - **Additional investigations (e.g. additional wells, groundwater sampling, sub-slab and Indoor air sampling).**

# OU2 Central Area Aquifer: On-Going Investigations & future cleanup decisions

- Southwest Properties:
  - Murphy Waste Oil
  - Whitney Barrel
  - Aberjona Auto Parts
- Central Area groundwater downgradient from OU1 Source Area Properties



# Contact Information

**Joseph F. LeMay, P.E.**
**Remedial Project Manager**
**U.S. EPA Region 1 – New England**
**Five Post Office Square**
**Suite 100 (mail code: OSRR07-4)**
**Boston, MA 02109-3912**
**Telephone # 617.918.1323**
**Email: lemay.joe@epa.gov**

**Doug Gutro**
**Public Affairs Coordinator**
**U.S. EPA Region 1 – New England**
**Five Post Office Square**
**Suite 100 (mail code: ORA01-1)**
**Boston, MA 02109-3912**
**Telephone # 617.918.1021**
**Email: gutro.doug@epa.gov**

**Joseph Coyne**
**Project Manager**
**Massachusetts DEP**
**1 Winter Street**
**Boston, MA  02109**
**Telephone # 617.348.4066**
**Email: joseph.coyne@state.ma.us**

**Mayor Scott Galvin**
**Woburn City Hall**
**10 Common Street**
**Woburn, MA 01810-4139**
**Telephone # 781.897.5901**
**Email: mayor@cityofwoburn.com**